Please amend claims 12-18 and 35-37 as follows:

12. (Amended) The method of claim 38, wherein all the amino acids of the compound are D-isomers.

13. (Amended) The method of claim 38, wherein Y' is Lys.

14. (Amended) The method of claim 38, wherein Y' is Lys and Z' is Phe.

15. (Amended) The method of claim 38, wherein Y' is Phe.

B1 SUBC1)

16. (Amended) The method of claim 38, wherein X' is Val-Val.

17. (Amended) The method of claim 38, wherein R_1 is acetyl.

18. (Amended) The method of claim 38, wherein R_1 is H or R_2 is H.

35. (Amended) A method for treating or preventing demens in a patient having Downs syndrome comprising administering to the patient in need thereof an effective amount of a compound according to formula

SUBC2)

B2

$$R_1\text{-}A' - Y' - Leu - X' - Z' - B' - R_2 \quad (I)$$

in which X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in β amyloid peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are -$(CH_2)_n$-, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

36. (Amended) A method for treating or preventing hereditary cerebral hemorrhage associated with amyloidosis (Dutch type) comprising administering to a patient in need thereof an effective amount of a compound according to formula

$$R_1\text{-A' - Y' - Leu - X' - Z' - B' - } R_2 \text{ (I)}$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are -$(CH_2)_n$-, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

37. (Amended) A method for preventing fibril formation of human amyloid protein in a patient in need thereof comprising administering to said patient an effective amount of a compound according to formula

$$R_1\text{-}A' - Y' - Leu - X' - Z' - B' - R_2 \quad (I)$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the

α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are $-(CH_2)_n-$, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

Kindly add new claims 38-41 as follows:

38. (Newly added) A method for inhibiting polymerization of an amyloid β peptide in a patient in need thereof comprising administering to said patient a therapeutic effective amount of a compound having formula

$$R_1\text{-}A' - Y' - Leu - X' - Z' - B' - R_2 \quad (I)$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are $-(CH2)_n-$, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

B3 cont

39. (Newly added) A method for treating or preventing Alzheimer's disease or another disease characterized by amyloidosis in a patient in need thereof comprising administering to said patient a therapeutic effective amount of a compound having formula

$$R_1\text{-A' - Y' - Leu - X' - Z' - B' - } R_2 \text{ (I)}$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the

α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are -$(CH2)_n$-, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

B3 cont

40. (Newly added) A method for inhibiting polymerization of an amyloid β peptide to a ligand comprising contacting an amyloid β peptide containing environment with a polymerization inhibitory effective amount of a compound according to formula

$$R_1\text{-A' - Y' - Leu - X' - Z' - B' - } R_2 \text{ (I)}$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the

α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are -$(CH2)_n$-, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

B3 cont

41. (Newly added) A method for inhibiting polymerization of an amyloid β peptide comprising contacting an amyloid β peptide containing environment with a polymerization inhibiting effective amount of a compound according to formula

$$R_1\text{-A' - Y' - Leu - X' - Z' - B' - } R_2 \text{ (I)}$$

in which

X' means any group or amino acid imparting to the compound of formula (I) the ability to bind to the KLVFF-sequence in amyloid β peptide, or two amino acids imparting the same ability, but with the proviso that one is not proline;

Y' means any amino acid;

Z' means any non-acidic amino acid;

A' means a direct bond or an α-amino acid bonded at the carboxyl terminal of the α-carboxy group or a di-, tri-, tetra- or pentapeptide bonded at the carboxyl terminal of the α-carboxy group;

B' means a direct bond or an α-amino acid bonded at the α-nitrogen or a di-, tri-, tetra- or pentapeptide bonded at the α-nitrogen of the N-terminal α-amino acid;

R_1 is H or -CO-R_3 bonded at the α-amino group of A';

R_2 is H, -OR_4 or NR_5R_6 all bound to the α-carboxyl group of the α-carboxyterminal of B';

B3 cont

R_3 is a straight or branched carbon chain of 1-4 carbon atoms;

R_4 is a straight or branched carbon chain of 1-4 carbon atoms;

R_5 and R_6 independently are H, alkyl, cycloalkyl, aryl or substituted aryl or together are -$(CH2)_n$-, where n is 4-5;

R_1 and R_2 together can form a hydrocarbon ring or heterocyclic ring; and

all the α-amino acids can be either D- or L-isomers.

REMARKS

I. CLAIM STATUS & AMENDMENTS

As correctly indicated on the Office Action Summary, claims 1-37 were previously pending in this application. However, Applicants by way of the present Amendment hereby cancel claims 1-11 and 19-34 without prejudice to or disclaimer thereof. Applicants reserve the right to file a continuation on any subject matter canceled by way of this Amendment.

The present Amendment also amends claims 12-18 and 35-37. Support for the amendments to claims 12-18 can be found, at least, in original claims 12-18, respectively, and in claim 11. Support for the amendments to claims 35-37 can be found, at least, in original claims 11-24, respectively. Thus, no prohibited new matter is believed to have been added by these amendments.